

## **PATENT**

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No.:

09/271,691

Filed:

March 18, 1999

Inventor(s):

Craig M. Conway

Title:

System and Method for

Efficiently Generating Packets on

a Serial Bus in

Response to Parallel Bus Cycles

ş

Examiner:

#1/M Vincent, David Robert

Group/Art Unit:

Atty. Dkt. No:

2661 5150-30300

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to Commissioner for Patents, Washington, DC 20231, on the date indicated below.

Jeffrey C. Hood

## SUBMISSION OF FORMAL DRAWINGS

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Sir:

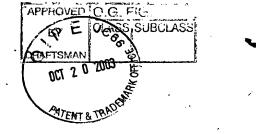
Applicant hereby submits the formal drawings for the above-referenced application and requests that these drawings (Figures 1-11C on 10 sheets) be accepted for filing.

Respectfully submitted,

Jeffrey C. Hood Reg. No. 35,198

ATTORNEY FOR APPLICANTS

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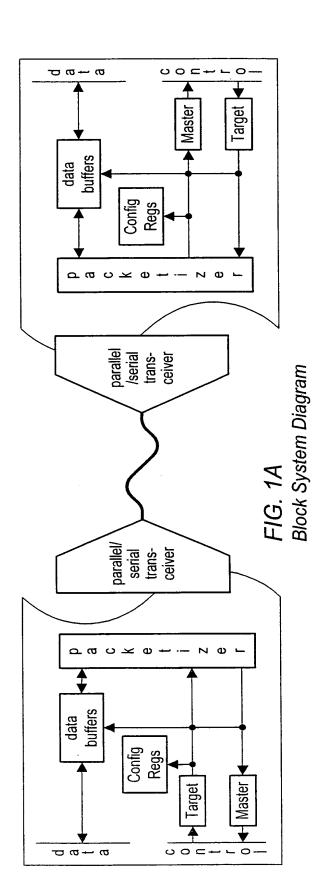
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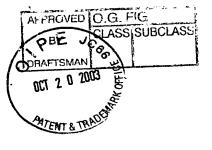
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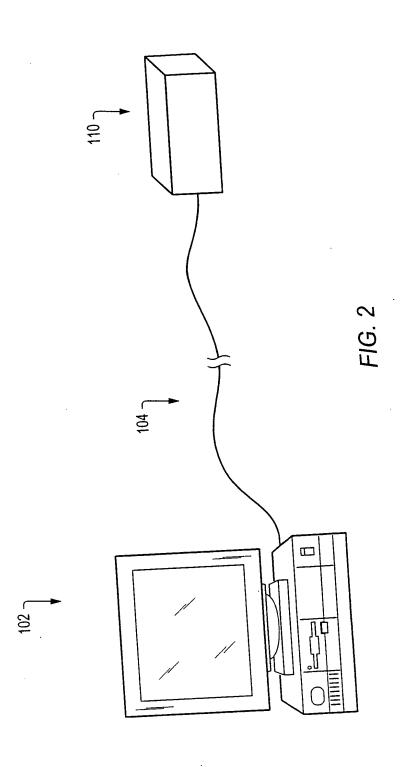
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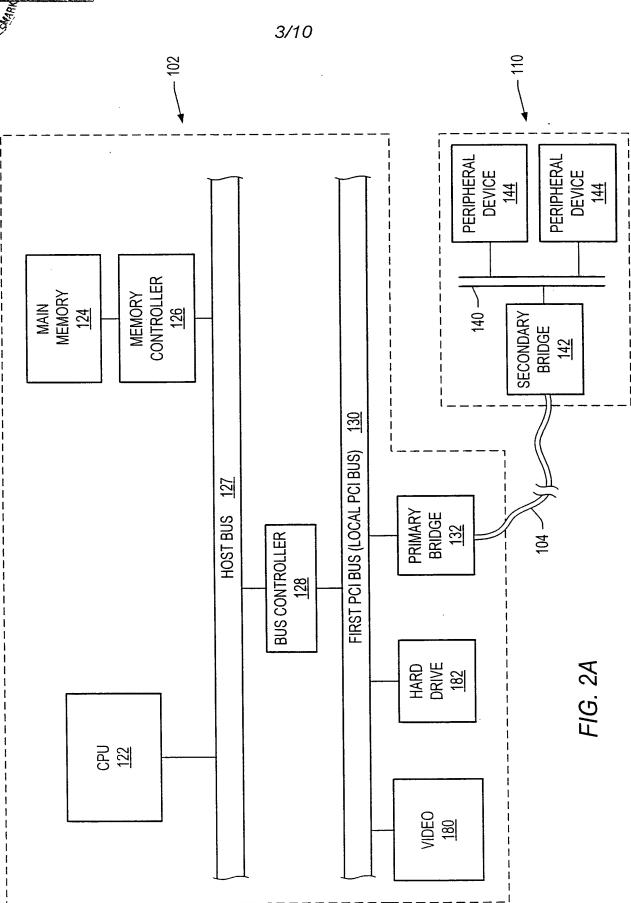
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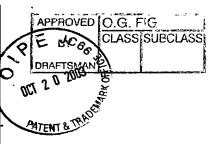
FIG. 1 PCI-PCI Bridge Block Diagram











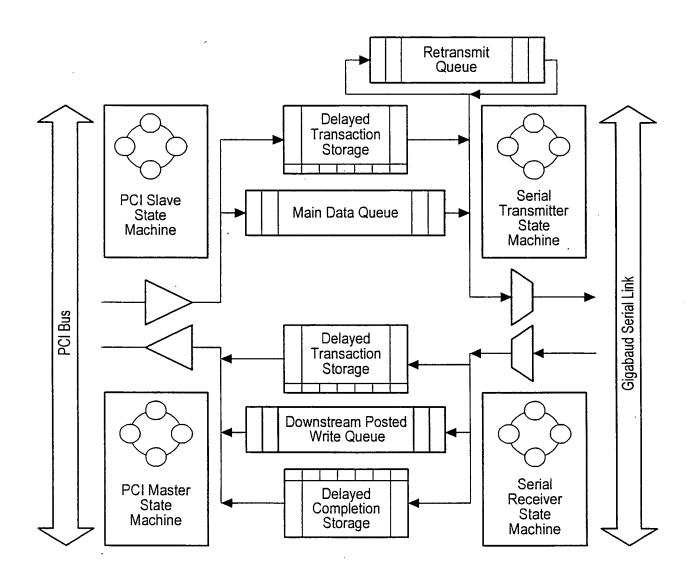
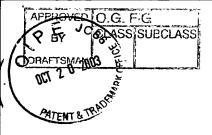


FIG. 3 WASP Block Diagram



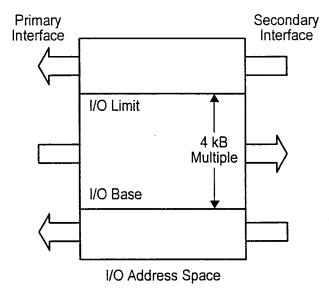


FIG. 4

I/O Transaction Forwarding Map

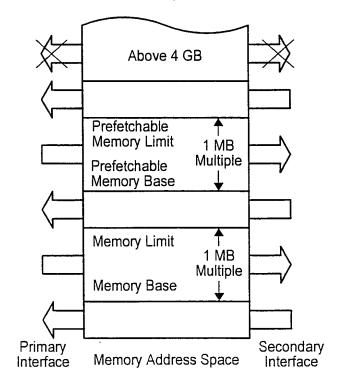
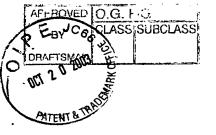


FIG. 5
Memory Transaction Forwarding Map



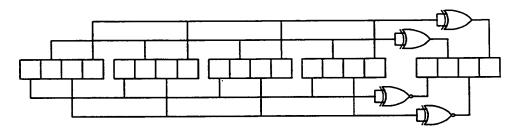
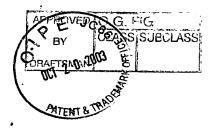


FIG. 6
WASP Frame Format and Parity Generation

Description		17	16	15 12	11 8	7 4	3 0
Posted Write	PW	U	ParErr	1000	PCI Cmd	PCI BE	Par
PCI Configuration	PCR	U	ParErr	1001	PCI Cmd	PCI BE	Par
Delayed Request 0	DR0	U	ParErr	1100	PCI Cmd	PCI BE	Par
Delayed Request 1	DR1	U	ParErr	1101	PCI_Cmd	PCI BE	Par
Delayed Request 2	DR2	U	ParErr	1110	PCI Cmd	PCI BE	Par
Delayed Completion	DC	U	ParErr	1111	PCI Cmd	PCI BE	Par
Success Ack	SA	U	U	0001	U	U	Par
Failure Ack	FA	U	U	0010	U	U	Par
Sanity Check	sc	υ	U	0011	U	U	Par
Reset	RST	U	U	0100	U	U	Par
Power On	POP	U	U	0101	U	υ	Par

FIG. 7 Command Packets



Error Condition	Response		
Bad PAR on title frame of command packet	ignore transfer		
Bad PAR on packet count frame of command packet	submit Failure ACK if received packet is not a Failure ACK or a Sanity Check		
Bad PAR on data packet	submit Failure ACK		
Receipt of data packet after fill frame (i.e. command packet did not start transfer)	ignore rest of transfer		
Received packet count does not match packet counter	submit Failure ACK		

FIG. 8
Error Condition Responses

Bits 33:32	Bits 31:0			
00	Command Frame			
01	PCI Address Frame or			
	Regular Data Frame			
10	PCI Data Frame			
11	Reserved			

FIG. 9

RTQ Packet Encoding

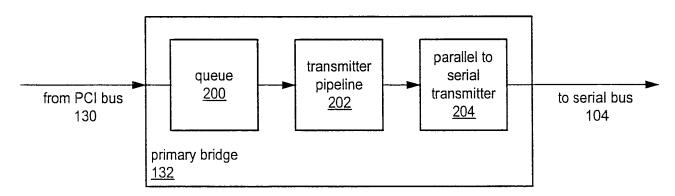
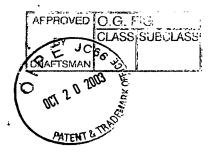
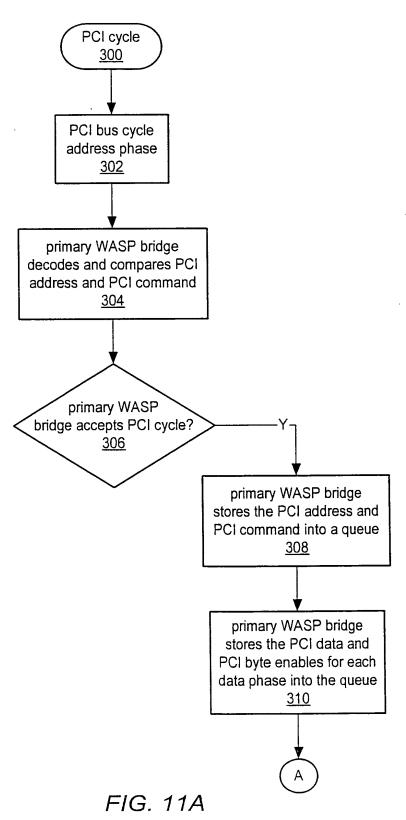
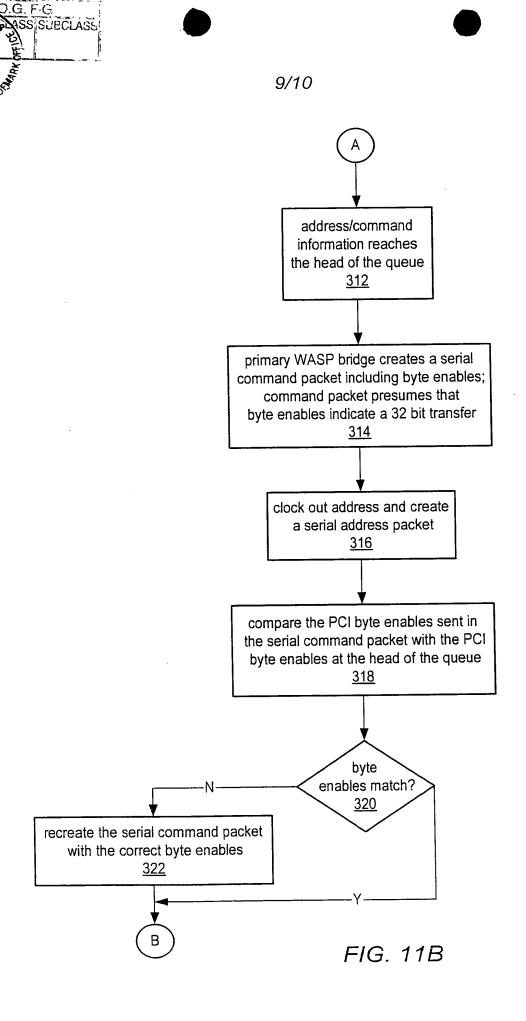
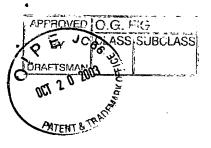


FIG. 10









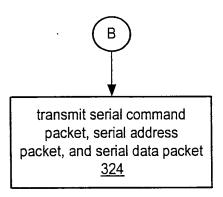


FIG. 11C